

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
IN THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appellant:	Curtis A. Richardson et al.)	
)	Group Art Unit: 1745
Serial No.:	10/607,603)	
)	
Filed:	06/27/2003)	Examiner: Alejandro, Raymond

For: GAS-FILLED GASKET FOR A SOLID-OXIDE FUEL CELL ASSEMBLY

Mail Stop: Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

REPLY BRIEF

Sir:

This Reply Brief is submitted in response to the Examiner's Answer mailed August 1, 2007.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is Delphi Technologies Inc.

II. RELATED APPEALS AND INTERFERENCES

Applicants, Applicants' legal representatives, and assignee are not aware of any related appeals or interferences.

III. STATUS OF CLAIMS

Claims 5-7 are currently pending and are the claims on appeal. Original claims 1-4 and 8 have been cancelled.

Claim 5 was rejected under 35 U.S.C. § 103 as being unpatentable over the PCT Patent Application Publication WO 01/17048, by Nagai, in view of U.S. Patent No. 6,231,053, by Wakamatsu.

Claim 5 was rejected under 35 U.S.C. § 103 as being unpatentable over the Patent Application Publication WO 01/17048, by Nagai, in view of Japanese patent publication 06-96783, referred to as JP '783.

Claim 5 was rejected under 35 U.S.C. § 103 as being unpatentable over the Patent Application Publication WO 01/17048, by Nagai, in view of U.S. Patent Application Publication 2004/0053099, by Franklin et al.

Claims 6 and 7 were rejected under 35 U.S.C. § 103 as being unpatentable over the Patent Application Publication WO 01/17048, by Nagai, in view of U.S. Patent No. 6,231,053, by Wakamatsu; and/or the Patent Application Publication WO 01/17048, by Nagai, in view of JP '783; and/or the Patent Application Publication WO 01/17048, by Nagai, in view of U.S. Patent Application Publication 2004/0053099, by Franklin et al. as applied to claim 5, and further in view of U.S. Patent Application Publication No. 2003/0150162, by Inagaki et al.

IV. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claim 5 is unpatentable under 35 U.S.C. § 103 over PCT Patent Application Publication WO 01/17048, by Nagai, in view of U.S. Patent No. 6,231,053, by Wakamatsu.

Whether claim 5 is unpatentable under 35 U.S.C. § 103 over the PCT Patent Application Publication WO 01/17048, by Nagai, in view of Japanese patent publication 06-96783, referred to as JP '783.

Whether claim 5 is unpatentable under 35 U.S.C. § 103 over the PCT Patent Application Publication WO 01/17048, by Nagai, in view of U.S. Patent Application Publication 2004/0053099, by Franklin et al.

Whether claims 6 and 7 are unpatentable under 35 U.S.C. § 103 over the Patent Application Publication WO 01/17048, by Nagai, in view of U.S. Patent No. 6,231,053, by Wakamatsu; and/or the Patent Application Publication WO 01/17048, by Nagai, in view of JP '783; and/or the Patent Application Publication WO 01/17048, by Nagai, in view of U.S. Patent Application Publication 2004/0053099, by Franklin et al. as applied to claim 5, and further in view of U.S. Patent Application Publication No. 2003/0150162, by Inagaki et al.

V. ARGUMENT

A. The Examiner's rejection of claim 5 is improper because the combination of Nagai and Wakamatsu does not teach each and every limitation of claim 5.

Referring to claim 5, the claim recites in part:

"a gasket disposed between said first and second components, said gasket being formed of first and second sheet metal elements and including

a planar region having an opening therein for passage of gas between said first and second components, said first and second sheet metal elements being bonded at said planar region, and

a pillow structure surrounding said opening and extending from said planar region, said pillow structure defining a gas-filled chamber enclosed with said first and second sheet metal elements and being diffusion bonded to said first and second components to form a sealed joint therebetween.

In particular, claim 5 recites "a planar region having an opening therein for passage of gas between said first and second components." In the Examiner's Answer, the Examiner utilizes Nagai and indicates: "Thus, the region where the electrolyte member is inserted constitutes the opening." See Examiner's Answer, page 4, lines 4-5. Referring to Figure 2 of Nagai, the region defined between the pitching parts 6a and 7a does receive the electrolyte member 5. However, the region defined between the pinching parts 6a and 7a does not allow the flow of gas between the separators 2 and 3. Accordingly, Nagai does not provide any teaching of a gasket having a "planar region having an opening therein for passage of gas between said first and second components", as recited in claim 5. Further, Wakamatsu does not provide any teaching of the foregoing limitations of claim 5.

Further, Nagai does not provide any teaching of a pillow structure surrounding an opening, wherein the opening allows the passage of gas between first and second components. In contrast, the portions of gasket sheets 6, 7 proximate to the spacer sheet 5a, do not surround the region defined between the pitching parts 6a and 7a. Accordingly, Nagai does not provide any teaching of: "a pillow structure surrounding said opening", as recited in claim 5. Further, Wakamatsu does not provide any teaching of the foregoing limitations of claim 5.

Further, Nagai does not provide teaching of a pillow structure defining a "gas-filled chamber." Referring to Figure 2 of Nagai, a space defined between gasket sheets 6 and 7 has the spacer sheet 5a contained therein. Accordingly, the space is not a "gas-filled chamber" because the space is at least partially filled with the spacer sheet 5a. Further, even if the spacer sheet 5a is removed, there is no teaching within Nagai on filling the space with the gas. Accordingly, Nagai does not provide any teaching of: "a pillow structure defining a gas-filled chamber enclosed with said first and second sheet metal elements", as recited in claim 5. Further, Wakamatsu does not provide any teaching of the foregoing limitations of claim 5.

Because the proposed combination of Nagai and Wakamatsu does not teach or suggest each and every limitation of independent claim 5, applicant submits that the rejection of claim 5 under 35 U.S.C. 103(a) based on these references is improper.

B. The Examiner's rejection of claim 5 is improper because the combination of Nagai and JP '783 does not teach each and every limitation of claim 5.

As discussed above, claim 5 recites "a planar region having an opening therein for passage of gas between said first and second components." In the Examiner's Answer, the Examiner utilizes Nagai and indicates: "Thus, the region where the electrolyte member is inserted constitutes the opening." See Examiner's Answer, page 4, lines 4-5. Referring to Figure 2 of Nagai, the region defined between the pitching parts 6a and 7a does receive the electrolyte member 5. However, the region defined between the pinching parts 6a and 7a does not allow the flow of gas between the separators 2 and 3. Accordingly, Nagai does not provide any teaching of a gasket having a "planar region having an opening therein for passage of gas between said first and second components", as recited in claim 5. Further, JP '783 does not provide any teaching of the foregoing limitations of claim 5.

Further, as discussed above, Nagai does not provide any teaching of a pillow structure surrounding an opening, wherein the opening allows the passage of gas between first and second components. In contrast, the portions of gasket sheets 6, 7 proximate to the spacer sheet 5a, do not surround the region defined between the pitching parts 6a and 7a. Accordingly, Nagai does not provide any teaching of: "a pillow structure surrounding said opening", as recited in claim 5. Further, JP '783 does not provide any teaching of the foregoing limitations of claim 5.

Further, as discussed above, Nagai does not provide teaching of a pillow structure defining a "gas-filled chamber." Referring to Figure 2 of Nagai, a space defined between gasket sheets 6 and 7 has the spacer sheet 5a contained therein. Accordingly, the space is not a "gas-filled chamber" because the spacer is at least partially filled with the spacer sheet 5a. Further, even if the spacer sheet 5a is removed, there is no teaching within Nagai on filling the space with the gas. Accordingly, Nagai does not provide any teaching of: "a pillow structure defining a gas-filled chamber enclosed with said first and second sheet metal elements", as recited in claim 5. Further, JP '783 does not provide any

teaching of the foregoing limitations of claim 5.

Because the proposed combination of Nagai and JP '783 does not teach or suggest each and every limitation of independent claim 5, applicant submits that the rejection of claim 5 under 35 U.S.C. 103(a) based on these references is improper.

C. The Examiner's rejection of claim 5 is improper because the combination of Nagai and Franklin et al. does not teach each and every limitation of claim 5.

As discussed above, claim 5 recites "a planar region having an opening therein for passage of gas between said first and second components." In the Examiner's Answer, the Examiner utilizes Nagai and indicates: "Thus, the region where the electrolyte member is inserted constitutes the opening." See Examiner's Answer, page 4, lines 4-5. Referring to Figure 2 of Nagai, the region defined between the pitching parts 6a and 7a does receive the electrolyte member 5. However, the region defined between the pinching parts 6a and 7a does not allow the flow of gas between the separators 2 and 3. Accordingly, Nagai does not provide any teaching of a gasket having a "planar region having an opening therein for passage of gas between said first and second components", as recited in claim 5. Further, Franklin et al. does not provide any teaching of the foregoing limitations of claim 5.

Further, as discussed above, Nagai does not provide any teaching of a pillow structure surrounding an opening, wherein the opening allows the passage of gas between first and second components. In contrast, the portions of gasket sheets 6, 7 proximate to the spacer sheet 5a, do not surround the region defined between the pitching parts 6a and 7a. Accordingly, Nagai does not provide any teaching of: "a pillow structure surrounding said opening", as recited in claim 5. Further, Franklin et al. does not provide

DP-309242

any teaching of the foregoing limitations of claim 5.

Further, Nagai does not provide teaching of a pillow structure defining a "gas-filled chamber." Referring to Figure 2 of Nagai, a space defined between gasket sheets 6 and 7 has the spacer sheet 5a contained therein. Accordingly, the space is not a "gas-filled chamber" because the spacer is at least partially filled with the spacer sheet 5a. Further, even if the spacer sheet 5a is removed, there is no teaching within Nagai on filling the space with the gas. Accordingly, Nagai does not provide any teaching of: "a pillow structure defining a gas-filled chamber enclosed with said first and second sheet metal elements", as recited in claim 5. Further, Franklin et al. does not provide any teaching of the foregoing limitations of claim 5.

Because the proposed combination of Nagai and Franklin et al. does not teach or suggest each and every limitation of independent claim 5, applicant submits that the rejection of claim 5 under 35 U.S.C. 103(a) based on these references is improper.

D. The Examiner's rejection of claims 6 and 7 are improper because: the combination of Nagai and Wakamatsu, and/or Nagai and JP '783, and/or Nagai and Franklin et al. and Inagaki et al. does not teach each and every limitation of claim 5.

Claims 6 and 7 depend either directly or indirectly from claim 5 and therefore include all of the limitations of claim 5. As discussed above, Nagai does not provide any teaching of a gasket having a "planar region having an opening therein for passage of gas between said first and second components", as recited in claim 5. Further, Wakamatsu, JP '783, Franklin et al. and Inagaki et al., alone or in combination, do not provide any teaching of the foregoing limitations of claim 5 and dependent claims 6 and 7.

Further as discussed above, Nagai does not provide any teaching of: "a pillow structure surrounding said opening", as recited in claim 5. Further, Wakamatsu, JP '783, Franklin et al., and Inagaki et al., alone or in combination, do not provide any teaching of the foregoing limitations of claim 5 and dependent claims 6 and 7.

Further as discussed above, Nagai does not provide any teaching of: "a pillow structure defining a gas-filled chamber enclosed with said first and second sheet metal elements", as recited in claim 5. Further, Wakamatsu, JP '783, Franklin et al., Inagaki et al., alone or in combination, do not provide any teaching of the foregoing limitations of claim 5 and dependent claims 6 and 7.

Because the proposed combinations of Nagai and Wakamatsu, and/or Nagai and JP '783, and/or Nagai and Franklin et al. and Inagaki et al. do not teach or suggest each and every limitation of independent claim 5, and claims 6 and 7 which depend from claim 5, applicant submits that the rejection of claims 6 and 7 under 35 U.S.C. 103(a) based on these references is improper.

VI. CONCLUSION:

In view of the foregoing arguments, applicant respectfully submits that the recited claims are novel and unobvious. Further, a reversal of the rejections of record, or such recommendation or relief as equity may require is respectfully requested.

If there are any additional charges with respect to this Reply Brief, please charge them to Deposit Account No. 06-1130.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "John F. Buckert", is written over a horizontal line.

John F. Buckert
Reg. No. 44,572

Dated: September 28, 2007
Cantor Colburn LLP
Telephone: (248) 524-2300
Fax: (248) 524-2700

CLAIMS APPENDIX

5. A fuel cell assembly comprising,
first and second components in spaced, parallel relationship, and
a gasket disposed between said first and second components, said gasket being
formed of first and second sheet metal elements and including
a planar region having an opening therein for passage of gas between said first and
second components, said first and second sheet metal elements being bonded at said
planar region, and
a pillow structure surrounding said opening and extending from said planar
region, said pillow structure defining a gas-filled chamber enclosed with said first and
second sheet metal elements and being diffusion bonded to said first and second
components to form a sealed joint therebetween.
6. A fuel cell assembly in accordance with Claim 5 wherein said assembly is an
auxiliary power unit for a vehicle.
7. A fuel cell assembly in accordance with Claim 6 wherein said vehicle is
selected from the group consisting of car, truck, boat, ship, airplane, and space vehicle.